

Rift Valley Fever: Local Knowledge, Health-Seeking Behaviours and Attitudes Towards Vaccination in Southern Uganda



Community animal health workers Lokuru Sarah (left) and Longole Simon Peter give an oral vaccination to a donkey near Kaabong, Uganda.
IMAGE: US ARMY AFRICA/Flickr, CC BY 2.0

Case Study

This SSHAP Case Study illustrates how the Anthropological Exploration of Facilitators and Barriers to Vaccine Deployment and Administration During Disease Outbreaks (AVID) project supported veterinary public health non-governmental organisations (NGOs) in southern Uganda to respond to re-emerging epizootic and zoonotic diseases, including Rift Valley Fever (RVF). The pilot project provided health-seeking behaviour mapping tools and qualitative data collection workshops to NGO staff to assist with data collection on the influence of local knowledge on vaccine uptake in border areas between the Democratic Republic of Congo (DRC) and Uganda. The case study can be used by veterinary public health officials and response workers to further their understanding on health-seeking behaviours, facilitators and barriers to vaccine deployment, and to assist with improving re-emerging epizootic and zoonotic disease surveillance.

The challenge: RVF vaccine uptake and regulating the unknown

RVF is a neglected re-emerging zoonotic viral infection associated with up to 90 per cent mortality in livestock and 30 per cent mortality in humans. It is spread by several species of mosquito found in many areas of sub-Saharan Africa and the Arabian Peninsula. RVF outbreaks are infrequent but, when they occur, can be explosive in nature causing overwhelming human and cattle morbidity and mortality. The most recent outbreaks have been reported in Sudan (2019, 2007), Uganda (2018), Niger (2016), Mauritania (2012), South Africa (2010), Madagascar (2008, 2009), Kenya, Somalia, and Tanzania (2006), Egypt (2003), and Saudi Arabia and Yemen (2000).

Livestock trade, human migration, and changing environmental conditions have caused the spread of RVF. Humans and livestock coexist in a strongly symbiotic relationship and share or depend on each other for security, shelter, food, water, transport, and related by-products. This interdependence predisposes humans to infection through mosquito bites and contact with, or consumption of, animal products. However, the magnitude of zoonotic transmission cannot be clearly defined due to very low and unreliable human and livestock surveillance for the disease, and there is poor collective knowledge on how farmers recognise and manage the acute symptoms of RVF. As a result, recent predictive models cannot accurately determine the timing and location of the next epidemic and we do not yet properly understand the health-seeking behaviours of farmers during an outbreak. This is concerning, as early detection of RVF is crucial to containing an outbreak, and attention needs to be paid to the behaviours of farmers who often self-manage acute symptoms without the assistance of veterinary professionals.

Improving veterinary service delivery to combat and control emerging and re-emerging animal disease is critical to meet the demand for livestock products in rural poor areas and in reducing associated animal-to-animal and animal-to-human transmission of disease. However, due to the medically pluralistic environment of Uganda, many livestock farmers employ complex combinations of both biomedical

and empirical healing practices. During this research, it became evident that farmers adopted practices according to their belief systems that dictate which healing modalities they seek in the event of illness. Often, they perceived a contradiction between physical and spiritual healing, for example, which led them to trust one healing modality over another. In some instances, trust was violated between patients and professionals due to both parties' miscommunication or misunderstanding of beliefs about disease causation, prevention or treatment. Given the wide range of diseases and contexts, it became essential to understand local knowledge systems to identify community perceptions of veterinary interventions.

Regulatory policies that are intended to guide veterinary service delivery in Uganda (e.g. the Veterinary Surgeons Act of 1958 and Animal Diseases Act of 1964) are outdated and do not provide strong frameworks to guide disease control, regulate who can provide care to animals, or address topics such as vaccine hesitancy. This means that actors of varying capacities, interests, and relevance provide veterinary services in Uganda without being effectually regulated. These actors have different goals, interests, and resources, resulting in the veterinary market being flooded with untested medicines with unknown efficacies and effects (especially antimicrobial agents), tested inputs being misused and incorrectly prescribed, and an overall reduction in trust in products such as vaccines.

The response: respect, regulation, and referral

In response to concerns about vaccine hesitancies and unknown health-seeking behaviours, and with a new RVF vaccine expected to be introduced in 2020/21 in Uganda, the AViD project aimed to provide insight into the various aetiologies and sources of knowledge regarding veterinary vaccination that affect its uptake in rural Ugandan communities. The project focused on how local knowledge around vaccines is constructed and communicated in two rural Ugandan cohorts, across 20 villages, through focus group discussions and semi-structured interviews with 92 individuals. The use of free listing and rank ordering to establish health-seeking

behaviours enabled the research team to understand who communities turn to for health advice when asked about specific symptoms associated with emerging zoonotic diseases. Through interviews, the team was able to learn who community members would seek vaccines from and provide them with information on their use, administration, and storage, and whether negative experiences of using vaccines on livestock affects the uptake of vaccines in their keepers and associated family members.

Participants were asked to list as many places/people/sources as they could think of with regard to where they can access vaccines or health advice/treatment if their animals developed specific symptoms of a given disease. They were then asked to create hierarchies of who they turn to first and why, when presented with a range of scenarios. With this information, the research team mapped hierarchies of social actors that inform patient knowledge of vaccination (rank ordering), gained an understanding of the symptoms participants

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feel they can manage on a self-led/self-referral basis, and began to map sources of vaccines/treatment in the communities. This informed the team about who community members turn to for health advice when symptoms associated with an emerging infectious disease develop, allowing veterinary public health teams to identify the appropriate alternative healthcare provider they need to engage with. In the event of an outbreak, the

research team thus has a better understanding of where cases could be being managed on a self-led/unreported basis, provides an opportunity for early intervention, and can help determine sources of misinformation or rumours regarding the use of products, such as vaccines.

In January 2020, two workshops were conducted with technical and veterinary staff from the NGO Conservation Through Public Health (CTPH). These

workshops aimed to communicate the initial results of the pilot study and to discuss how to further progress data collection and disease surveillance. The workshops reiterated that farmers' health-seeking behaviours were not to be criticised, but respected and better understood. Alternative healthcare providers – such as traditional and spiritual healers – are relied upon and trusted at the community level and provide a touchstone for farmers when responding to animal health concerns. A clear message was that we must work with, not against, such individuals and practices.

To detect outbreaks earlier and increase veterinary interventions when needed, simple referral pathways for alternative healthcare providers are being developed with CTPH. These pathways are based on the language used and data provided by interviewed farmers and take the format of an infographic (using imagery rather than text) due to the success of previously developed infographics used in these areas to engage community members, both literate and illiterate. They have been designed to encourage alternative healthcare providers to refer cases to veterinary professionals if specific symptoms of a notifiable zoonotic or epizootic are presented to them. In return, they receive a small reward if diagnosis is confirmed and they can continue with their treatment, thus preserving their position and influence in their communities. By respecting their right to practice as community healthcare providers while also working with them to reduce the effects of future outbreaks, social science inputs can be used to effectively support veterinary public health initiatives.

The information collected during this research will also assist with the creation of education tools, such as flip chart lessons focused on increasing veterinary professional contact in rural areas and promote vaccine awareness. This model can and should be used in other contexts and settings to better understand the facilitators and barriers to effective vaccine deployment and broader public health responses to outbreaks.

Lessons learned: acknowledge alternative care practices

The key lesson learned from this project is to acknowledge and respect community members' right

to seek healthcare and healthcare products from alternative healthcare providers. Increasing engagement with alternative healthcare providers and creating spaces for conversation regarding when and why cases should be referred to veterinary professionals assists with the following:

- Increased surveillance of who farmers are engaging with when managing acute symptoms of notifiable re-emerging epizootic and zoonotic disease.
- Earlier detection of infectious diseases that affect both humans and animals through

direct engagement with community health-seeking behaviours.

- Preserving the social positioning of alternative healthcare providers, who are often more trusted by communities than biomedical veterinary professionals.
- Developing an understanding of information and misinformation being communicated to community members on subjects such as vaccination. This highlights opportunities to engage with rumours and concerns about vaccines in remote areas that ultimately affect uptake.

Further reading

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About

The Social Science in Humanitarian Action Platform (SSHAP) aims to establish networks of social scientists with regional and subject expertise to rapidly provide insight, analysis and advice, tailored to demand and in accessible forms, to better design and implement emergency responses. SSHAP is a partnership between the Institute of Development Studies (IDS), the London School of Hygiene and Tropical Medicine (LSHTM), Anthrologica and UNICEF Communication for Development (C4D).



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Credits

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